

Claims

1. A non-stick coating comprising at least one-coat comprising:

- a. a silane;
- b. a binder component; and
- c. a fluoropolymer component;

wherein the weight ratio of the binder component to the fluoropolymer component is about 1:4.

2. The non-stick coating of claim 1, wherein the binder component comprises PES and the fluoropolymer component comprises MFA.

3. The non-stick coating of claim 1, wherein the binder component comprises PAI and the fluoropolymer component comprises MFA.

4. The non-stick coating of claim 1, wherein the binder component comprises PES and the fluoropolymer component comprises PFA.

5. The non-stick coating of claim 1, wherein the binder component comprises PAI and the fluoropolymer component comprises PFA.

6. The non-stick coating of claim 1, wherein the one-coat is cured by infrared radiation.

7. The non-stick coating of claim 1, wherein the one-coat further includes a black pigment.

8. A conductive non-stick coating comprising at least one-coat, the one-coat comprising:

- a. a silane;
- b. a conductive pigment;
- c. a binder component;
- d. a fluoropolymer component; and

wherein the weight ratio of the binder component to the fluoropolymer component is about 1:4.

9. The non-stick coating of claim 8, wherein the binder component comprises PES and the fluoropolymer component comprises MFA.

10 The non-stick coating of claim 8, wherein the binder component comprises PAI and the fluoropolymer component comprises MFA.

10 11. The non-stick coating of claim 8, wherein the binder component comprises PES and the fluoropolymer component comprises PFA.

12. The non-stick coating of claim 8, wherein the binder component comprises PAI and the fluoropolymer component comprises PFA.

13. The non-stick coating of claim 8, wherein the one-coat is cured by infrared radiation.

14. The non-stick coating of claim 8, wherein the one-coat further includes a black pigment.

15. A non-stick coating comprising:  
a. a primer coat;  
b. an intermediate coat, the intermediate coat comprising a binder component and a fluoropolymer component, wherein the weight ratio of the binder component to the fluoropolymer component is about 7:3; and  
c. a top coat, the top coat comprising a fluoropolymer.

16. The non-stick coating of claim 15, wherein the binder component is PES and the fluoropolymer component is a blend of FEP and PTFE.

17. The non-stick coating of claim 15, wherein the binder component is PES and the fluoropolymer component is MFA.

5 18. The non-stick coating of claim 15, wherein the primer coat comprises a silane.

19. A conductive non-stick coating formulation comprising:  
a. a primer coat;  
b. an intermediate coat, the intermediate coat comprising a  
10 conductive pigment, a binder component and a fluoropolymer component, wherein the weight ratio of the binder component to the fluoropolymer component is about 7:3; and  
c. a top coat, the top coat comprising a fluoropolymer.

15 20. The non-stick coating of claim 19, wherein the binder component is PES and the fluoropolymer component is a blend of FEP and PTFE.

20 21. The non-stick coating of claim 19, wherein the binder component is selected from the group consisting of PES, PPS and PAI.

22. The non-stick coating of claim 19, wherein the fluoropolymer component is selected from the group consisting of MFA, PFA, FEP and PTFE.

25 23. A method of forming a non-stick coating, the method comprising the following steps:

a. applying a primer coat, the primer coat comprising a silane;

30 b. applying an intermediate coat, the intermediate coat comprising a binder component and a fluoropolymer component, wherein the

weight ratio of the binder component to the fluoropolymer component is about 7:3;

- c. applying a top coat; and
- d. curing the applied coats with infrared radiation.

5

24. The method of claim 23 wherein the intermediate coat further comprises a conductive pigment.

10

25. The method of claim 23, wherein the coating is applied to a rubber substrate.

26. The method of claim 23, wherein the coating is applied to a silicone rubber substrate.

15

27. The method of claim 26, wherein the silicone rubber substrate has a durometer of less than 20.

28. The method of claim 26, wherein the silicone rubber substrate has a durometer of less than 10.

20

29. A method of forming a one-coat non-stick coating, the method comprising the following steps:

- a. applying a coating comprising binder component and a fluoropolymer component, wherein the weight ratio of binder resin to fluoropolymer resin is about 1:4; and
- b. curing the coating with infrared radiation.

25

30. The method of claim 29 wherein the intermediate coat further comprises a conductive pigment.

30

31. The method of claim 29, wherein the coating is applied to a rubber substrate.

32. The method of claim 29, wherein the coating is applied to a silicone rubber substrate.

5           33. The method of claim 32, wherein the silicone rubber substrate has a durometer of less than 20.

34. The method of claim 32, wherein the silicone rubber substrate has a durometer of less than 10.

10